

Title (en)  
DETECTION AND QUANTIFICATION OF BRAIN MOTION AND PULSATILITY

Title (de)  
NACHWEIS UND QUANTIFIZIERUNG DER HIRNBEWEGUNG UND -PULSATILITÄT

Title (fr)  
DETECTION ET QUANTIFICATION DE MOUVEMENT CÉRÉBRAL ET DE PULSATILITÉ

Publication  
**EP 3496620 A4 20200513 (EN)**

Application  
**EP 17840099 A 20170807**

Priority  
• US 201662372729 P 20160809  
• US 2017045771 W 20170807

Abstract (en)  
[origin: WO2018031477A1] The pumping of arterial blood into the cerebral spinal fluid (CSF) of a patient's brain creates cycle pressure undulations in the CSF and the brain itself. Brain injuries can create abnormal changes in this pressure waveform. Accordingly, the disclosed technology includes an ultrasound based device for monitoring this brain movement in the CSF ("pulsatility") to diagnose and monitor brain injury.

IPC 8 full level  
**A61B 8/08** (2006.01)

CPC (source: EP US)  
**A61B 5/14551** (2013.01 - US); **A61B 5/33** (2021.01 - US); **A61B 8/02** (2013.01 - US); **A61B 8/08** (2013.01 - EP US);  
**A61B 8/0808** (2013.01 - EP US); **A61B 8/4477** (2013.01 - EP US); **A61B 8/486** (2013.01 - EP US); **A61B 8/52** (2013.01 - EP US);  
**A61B 8/5284** (2013.01 - US); **A61B 8/543** (2013.01 - EP US); **A61B 8/4227** (2013.01 - EP)

Citation (search report)  
• [A] KUCEWICZ J C ET AL: "Tissue Pulsatility Imaging of Cerebral Vasoreactivity During Hyperventilation", ULTRASOUND IN MEDICINE AND BIOLOGY, NEW YORK, NY, US, vol. 34, no. 8, 1 August 2008 (2008-08-01), pages 1200 - 1208, XP023176823, ISSN: 0301-5629, [retrieved on 20080312], DOI: 10.1016/J.ULTRASMEDBIO.2008.01.001  
• See references of WO 2018031477A1

Cited by  
EP3534777A4; US11760905B2

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2018031477 A1 20180215**; EP 3496620 A1 20190619; EP 3496620 A4 20200513; US 11013489 B2 20210525;  
US 2019175141 A1 20190613

DOCDB simple family (application)  
**US 2017045771 W 20170807**; EP 17840099 A 20170807; US 201716324457 A 20170807